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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,293	08/28/2000	Lawrence T. Cohen	2447-012	7384
22506	7590	10/22/2004	EXAMINER	
JAGTIANI + GUTTAG 10363-A DEMOCRACY LANE FAIRFAX, VA 22030			EVANISKO, GEORGE ROBERT	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/649,293

Applicant(s)

COHEN, LAWRENCE T.

Examiner

George R Evanisko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/2/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20, 21, 23, 24, and 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 20, 23, and 26, “uses” specific frequency bands is vague since it is unclear what element is performing this function. It is suggested to use something similar to “wherein said electrodes are positioned to use specific...”.

In claims 21, 24, 27, and 28, “disposed deeper in an ear” is vague since it sounds as if the apparatus is claiming connection to the body or claiming a step of implanting the device. Apparatus claims can not claim a connection to the body. It is suggested to use “adapted to be disposed deeper...”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19-24 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochmair-Desoyer et al (“An eight Channel...Prostheses”). It is noted that the claims state that

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“any two” consecutive electrodes have a different distance than “any one other pair”. Since Hochmair-Desoyer uses one pair from the same channel as 1.5 mm, and another pair between two consecutive contacts of different channels as 0.5 mm, it will meet the claimed limitation of “any two” and “any one other pair”. (It is noted that the claims do not state that “such that all consecutive electrode pairs of said four consecutive electrodes have a different distance between them than all other consecutive electrode pairs...”). In addition, it is noted that the claims do not state that the electrode density gradually increases along the “entire” electrode array.

Claims 21-27 are rejected under 35 U.S.C. 102(a) as being anticipated by Fu and Shannon, “Effects of Electrode...Implant”. Fu and Shannon show in experiment III the consecutive active electrodes with the non-uniform electrode density.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochmair et al (4284865). Hochmair shows in figure 9 the precurved electrode array and teaches the uses of at least 4 consecutive electrodes (4 channels or figures 5 and 8) but does not disclose the electrode spacing to have a higher and/or non-uniform density to match aural receptors/positions. Hochmair does disclose the schematic of the cochlea showing the frequency response, the use of at least four different frequency ranges, the stimulating of the lower frequency stimulation sites

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near the apex, and does disclose that the electrode contacts can be positioned on the device to stimulate regions of the cochlea for a desired frequency response and in accordance with the frequency response of the cochlea. This provides a clear suggestion that the spacing of the electrodes can be modified to change the distance between adjacent electrodes to have a higher density at the proximal end and/or non-uniform density at locations to match aural receptors/positions to correspond to a desired frequency response and in accordance with the frequency response of the cochlea. The determination of the most appropriate spacing of the electrodes by routine experimentation, such as having the spacing between adjacent electrodes at the apical end be less than the spacing at the basal end, the spacing to be different in different regions, and the spacing to be non-uniform or being a higher density between consecutive electrodes at the proximal end, would, therefore, be prima facie obvious to one having ordinary skill in the medical art.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fu and Shannon.

Fu and Shannon disclose the claimed invention except for the electrode being precurved for periomodular placement. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cochlear electrode array as taught by Fu and Shannon, with the array being precurved for periomodular placement since it was known in the art that cochlear electrode arrays are precurved for periomodular placement to more effectively stimulate the cochlea and auditory nerve cells.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R Evanisko whose telephone number is 703 308-2612. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703 308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George R Evanisko
Primary Examiner
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GRE
October 17, 2004

10/17/04